AMENDMENTS TO THE CLAIMS

1. **(Currently amended)** An isolated polypeptide comprising a sequence selected from the group consisting of SEQ ID No. 2 and a sequence with 95% identity thereto ~~or SEQ ID No. 4~~.

2. **(Currently amended)** An isolated polynucleotide that encodes an isolated polypeptide comprising a sequence selected from the group consisting of SEQ ID No. 2 and a sequence with 95% identity thereto ~~a polypeptide according to claim 1~~.

3. **(Currently amended)** An isolated polynucleotide according to claim 2, selected from the group consisting of SEQ ID No. 1, ~~or~~ SEQ ID No. 3, the complement of SEQ ID NO: 1, the complement of SEQ ID NO: 3, the reverse complement of SEQ ID NO: 1, the reverse complement of SEQ ID NO: 3, the reverse sequence of SEQ ID NO: 1, and the reverse sequence of SEQ ID NO: 3.

4. **(Canceled)**

5. **(Currently amended)** An isolated polynucleotide comprising a nucleotide sequence that differs from SEQ ID No: 1 or SEQ ID No. 3 as a result of silent substitution(s) or substitution(s) that results in conservative substitution(s) in the resulting amino acid.

6. **(Currently amended)** An isolated polypeptide encoded by a polynucleotide ~~of claim 4 or claim 5~~ comprising a nucleotide sequence that differs from SEQ ID No: 1 or SEQ ID No. 3 as a result of silent substitution(s) or substitution(s) that results in conservative substitution(s) in the resulting amino acid.

7. **(Currently amended)** A fusion protein comprising at least one polypeptide according to claim 1 ~~or claim 6~~ or a fragment thereof and additional amino acids.

8. **(Currently amended)** A vector comprising a polynucleotide according to any one of claims 2 or ~~to~~ 5.

9. **(Currently amended)** The vector according to claim 8, further comprising, in the 5'-3' direction:

a) a gene promoter sequence; and

b) a gene termination sequence. ~~a polynucleotide sequence according to any one of claims 2 to 5; and~~

~~c) a gene termination sequence.~~

10. **(Currently amended)** The vector according to claim 8 ~~or claim 9~~, wherein the polynucleotide is in a sense orientation.

11. **(Currently amended)** The vector according to claim 8 ~~or claim 9~~, wherein the polynucleotide is in an antisense orientation.

12. **(Currently amended)** A host cell containing a vector according to ~~any one of~~ claims 8 ~~to 11~~.

13. **(Currently amended)** A composition for regulating muscle growth, comprising an active ingredient selected from the group consisting of ~~any one of~~:

a) a polynucleotide comprising SEQ ID No. 1, ~~or~~ SEQ ID No.3, or SEQ ID NO: 5,

b) a fragment or variant of (a),

c) a polynucleotide having at least 95%~~, 90% or 70%~~ sequence identity to (a),

d) a complement of any one of (a) to (c),

e) a reverse complement of any one of (a) to (c),

f) an antisense polynucleotide of any one of (a) to (c),

g) a polypeptide encoded by any one of (a) to (c),

h) a polypeptide comprising SEQ ID No. 2 or SEQ ID No. 4,

i) a fragment or variant of (g) or (h), and

j) a polypeptide having at least 95%~~, 90% or 70%~~ sequence identity relating to (g) or (h); and

a pharmaceutically acceptable diluent, excipient or carrier.

14. **(Canceled)**

15. **(Currently amended)** A composition for modulating mighty gene expression comprising a compound capable of binding to a polynucleotide selected from the group consisting ~~any one~~ of:

a) SEQ ID No. 1, SEQ ID No. 3,or SEQ ID No. 5,

b) a polynucleotide that encodes a polypeptide of SEQ ID No. 2 or SEQ ID No. 4,

c) a polynucleotide having at least 95%~~, 90% or 70%~~ sequence identity to (a) or (b),

d) a complement of any one of (a) to (c),

e) a reverse complement of any one of (a) to (c) , and

f) a fragment or variant of any one of (a) to (e); and

a pharmaceutically acceptable diluent, excipient or carrier.

16. **(Original)** The composition according to claim 15 wherein the compound is an anti-sense polynucleotide.

17. **(Currently amended)** The composition according to claim 15 ~~or claim 16~~ wherein the compound is an interfering RNA molecule.

18. **(Original)** The composition according to claim 17 wherein the interfering RNA molecule is an RNAi or siRNA molecule.

19. **(Original)** The composition according to claim 15, wherein the compound is myostatin.

20. **(Original)** The composition according to claim 15, wherein the compound is a myostatin mimetic.

21. **(Original)** The composition according to claim 20, wherein the myostatin mimetic is a myostatin peptide C-terminally truncated at or between amino acid positions 330 and 350.

22. **(Currently amended)** The composition according to claim 20 ~~or claim 21~~, wherein the myostatin mimetic is a myostatin peptide C-terminally truncated at ~~any one~~ a position selected from the group consisting of amino acid positions 330, 335, and 350.

23. **(Original)** The composition according to claim 15, wherein the compound is an antibody.

24. **(Canceled)**

25. **(Canceled)**

26. **(Canceled)**

27. **(Canceled)**

28. **(Currently amended)** A method of regulating muscle growth of an organism, comprising administering to said organism a composition according to ~~any one of~~ claims 13 or 15~~to 23~~.

29. **(Currently amended)** The method according to claim 28, for the production of ~~an animal having~~ increased muscle mass in said organism.

30. **(Currently amended)** The method according to claim 28, for the treatment or prophylaxis of a disease associated with muscle growth in said organism.

31. **(Currently amended)** The ~~methods~~ method according to claim 30, wherein the disease is associated with muscle atrophy.

32. **(Currently amended)** The method according to claim 30 ~~or claim 31~~, wherein the disease is selected from the group consisting of muscular dystrophy, muscle cachexia, atrophy, hypertrophy, muscle wasting associated cancer or HIV, amyotrophic lateral sclerosis (ALS), ~~or~~ and diseases associated with cardiac muscle growth, including infarct.

33. **(Currently amended)** A method according to claim 28, for promoting muscle regeneration after muscle injury in said organism.

34. **(Cancelled)**.

35. **(Cancelled)**.

36. **(Cancelled)**.

37. **(Cancelled)**.

38. **(Cancelled)**.

39. **(Currently amended)** A transgenic animal comprising a vector according to ~~any one of~~ claims 8 ~~to 11, or a composition according to any one of claims 13 to 18~~.

40. **(Original)** The transgenic animal according to claim 39, wherein said animal has an increased muscle mass.

41. **(Currently amended)** The transgenic animal according to claim 39 ~~or claim 40~~, selected from the group consisting of a sheep, cow, bull, deer, poultry, turkey, pig, horse, mouse, rat ~~or~~ and human.

42. **(Currently amended)** A method of predicting muscle mass in an animal, comprising the steps of:

obtaining a sample from the animal,

~~iii)~~determining the gene expression level from a polynucleotide having a sequence of SEQ ID No. 1 or SEQ ID No. 3, a polynucleotide having at least 95%~~, 90% or 70%~~ sequence identity to SEQ ID No. 1 or SEQ ID No. 3, or a fragment or variant thereof; or determining the amount of a polypeptide having a sequence of SEQ ID No. 2 or SEQ ID No. 4, a polypetide having at least 95%~~, 90% or 70%~~ sequence identity to SEQ ID No. 2 or SEQ ID No. 4, or a fragment or variant thereof,

~~iv)~~ comparing the gene expression level or amount of polypeptide to an average; and

~~v)~~ predicting the muscle mass of said animal based on the gene expression level.

43. **(Original)** The method according to claim 42, wherein the level of gene expression is determined using RTPCR or northern analysis.

44. **(Original)** The method according to claim 43, wherein the amount of the polypeptide is determined using ELISA or Western blot analysis.

45. **(Currently Amended)** A method of detecting a variant of mighty, comprising the use of a nucleotide sequence selected from the group consisting of:

a) SEQ ID No. 1, SEQ ID No. 3, or SEQ ID No. 5,

b) a polynucleotide that encodes a polypeptide of SEQ ID No. 2 or SEQ ID No. 4,

c) a polynucleotide having at least 95%~~, 90% or 70%~~ sequence identity to (a) or (b),

d) a complement of any one of (a) to (c),

e) a reverse complement of any one of (a) to (c), and

f) a fragment or variant of any one of (a) to (e), to screen a sample from an organism for the variant of mighty.

46. **(Original)** The method according to claim 45, wherein the variant is a polymorphism.

47. **(Original)** The method according to claim 46, wherein the polymorphism is a single nucleotide polymorphism.

48. **(Currently amended)** The method according to ~~any one of~~ claims 45~~ to 47~~, wherein the variant of mighty is associated with an altered muscle phenotype.

49. **(Currently amended)** A method of breeding an animal having improved muscle mass comprising the steps of:

selecting one or more animals predicted to have an increase in muscle mass using the method according to ~~any one of~~ claims 42~~ to 44 or 48~~, and

breeding the one or more animals predicted to have an increased muscle mass to produce an animal having an improved muscle mass.

50. **(Currently amended)** The method according to claim 49, wherein the animal is selected from the group consisting of a sheep, cow, bull, deer, poultry, turkey, pig, horse, mouse, rat, fish ~~or~~ and human.

51. **(Currently Amended)** An antibody that preferentially binds a polypeptide having a sequence of SEQ ID NO. 2 or SEQ ID NO. 4 or a polypeptide having at least 95%~~, 90% or 70%~~ sequence identity to SEQ ID NO. 2 or SEQ ID NO. 4.

52. **(Currently Amended)** An antigenic fragment of a polypeptide comprising a sequence of SEQ ID NO.2 or SEQ ID NO. 4 in the production of an antibody that preferentially binds a sequence of SEQ ID NO. 2 or SEQ ID NO. 4 or a polypeptide having at least 95%~~, 90% or 70%~~ sequence identity to SEQ ID NO. 2 or SEQ ID NO. 4.

53. **(Currently Amended)** An isolated polynucleotide selected from the group consisting ~~comprising any one~~ of:

a) a polynucleotide comprising the sequence of SEQ ID No: 5,

b) a polynucleotide ~~having~~ comprising at least 95%~~, 90% or 70%~~ sequence identity to SEQ ID No. 5, and

c) a polynucleotide comprising a fragment or variant ~~thereof~~ of (a) or (b) having promoter activity.

54. **(Canceled)**

55. **(Currently amended)** An isolated polynucleotide according to claim 53~~54~~, comprising at least the 200 nucleotides upstream of the mighty initiation site.

56. **(Currently amended)** An isolated polynucleotide according to claims 53~~54 or claim 55~~, comprising a fragment selected from the group consisting of those ~~fragments of any on of~~ 209, 287, 315, 400, 600, 1000 and 2100 nucleotides upstream of the mighty initiation site.

57. **(Currently amended)** A vector comprising a polynucleotide according to ~~any one of~~ claims 53~~54 to 56~~.

58. **(Currently amended)** An isolated host cell containing a vector according to claim 57.

59. **(Currently amended)** A method of screening for one or more compounds that are potentially useful in inhibiting or promoting muscle growth, comprising the steps of:

inserting a polynucleotide according to ~~any one of~~ claims 53~~54 to 56~~ into a suitable vector linked to a suitable marker gene;

transforming a suitable host cell with the vector;

administering a compound of interest to the host cell; and

determining any difference in the level of the marker gene expression.

60. **(Currently amended)** The method according to claim 59, wherein the vector is selected from the group consisting ~~any one~~ of a prokaryotic plasmid, a eukaryotic plasmid ~~or~~ and a viral vector.

61. **(Currently amended)** The method according to claim 59 ~~or claim 60~~, wherein the marker gene is ~~any one of~~ a polynucleotide that encodes ~~any one~~ a protein selected from the group consisting of: a green fluorescent protein, a red fluorescent protein, a luciferase enzyme, ~~or~~ and a β-galactosidase enzyme.

62. **(Currently amended)** A method of expressing a desired protein in a muscle cell, comprising the steps of:

isolating a polynucleotide sequence that encodes the gene to be expressed;

inserting a polynucleotide according to ~~any one of~~ claims 53~~54 to 56~~, operably linked to the polynucleotide sequence of the protein to be expressed in a 5' - 3' orientation, into a suitable vector, and

introducing the vector into a muscle host cell.

63. **(Currently amended)** The method according to claim 62, wherein the vector is ~~any one~~ selected from the group consisting of a eukaryotic vector, viral vector, ~~or~~ and any vector suitable for gene therapy.

64. **(Currently amended)** The method according to claim 62 ~~or claim 63~~, wherein the host cell is ~~any one~~ selected from the group consisting of a primary myoblast cell line, a transformed myoblast cell line ~~or~~ and any cell line in which the mighty promoter is active.

65. **(Currently amended)** The method according to claim 62 ~~or claim 63~~, wherein the host cell is an *in vivo* skeletal or cardiac muscle cell of a host animal.

66. **(Currently amended)** The method according to claim 65, wherein the host animal is ~~any one~~ selected from the group consisting of a sheep, cow, deer, bull, poultry, turkey, pig, horse, mouse, rat, fish ~~or~~ and human.